

3. Elijah

Program Name: Elijah.java

Input File: elijah.dat

Elijah is working on writing a program that rotates images, but he's having trouble figuring it out. He knows you're quite apt at programming and has enlisted you to help him out.

Input: The first input line will contain a single number N ($1 \leq N \leq 100$) denoting the number of inputs to follow. Each input will start with two values R, C ($1 \leq R, C \leq 100$) denoting the number of rows and columns respectively of the image to follow. The following R lines will contain C characters, representing the image Elijah is supposed to rotate. The final line of each input will be a single value V ($1 \leq V \leq 10^{20}$) denoting the number of degrees to rotate the image.

Note: V is guaranteed to be a multiple of 90, and all rotations are clockwise.

Output: Output each image rotated with a blank line separating each image.

Sample input:

```
1
11 10
@@@@@@@@@@
@          @
@  * * * *  @
@  *   *   @
@  *   *   @
@  *   *   @
@  *   *   @
@  *   *   @
@  * * * *  @
@          @
@@@@@@@@@@
90
```

Sample output:

```
@@@@@@@@@@@@
@          @
@          @
@ * * * * * @
@ *       * @
@ *       * @
@ * * * * * @
@          @
@          @
@@@@@@@@@@@@
```